



**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NO. 67216**

Pen-Rob, Inc.

I. INTRODUCTION

This Class I operating permit is issued to Pen-Rob, Inc., the Permittee, for continued operation of the Painted Desert Landfill (PDL) which is a municipal solid waste landfill located at 9001 North Porter Avenue, Joseph City, Navajo County, Arizona 86032.

A. Company Information

1. Facility Name: Painted Desert Landfill
2. Facility Location: 9001 North Porter Avenue, Joseph City, Navajo County, Arizona 86032
3. Mailing Address: P. O. Box 190, Joseph City, AZ 86032

B. Attainment Classification

The facility is located in an area which is designated attainment/unclassified for all criteria pollutants.

II. PROCESS DESCRIPTION

A. Process Description

Painted Desert Landfill began operation in 1988 and the design capacity for the landfill is estimated at 20.7 million tons. The primary activities at the landfill are the transportation and deposition of refuse along with the excavation and stockpiling of cover material and soil. PDL accepts non-hazardous industrial and solid wastes, construction and demolition debris, Arizona state regulated special wastes, white goods and other special wastes.

B. Control Devices

Landfills subject to NSPS Subpart WWW with non-methane organic compound emissions over 50 megagrams per year (Mg/yr) are required to install a gas collection and control system. PDL initially had 16 vertical gas extraction wells routed to a candlestick flare. Normally, the wells would be operated under negative pressure. However, due to poor flow and gas quality at eight of the wells (EW-5 to EW-12), the Permittee proposed to operate eight of the wells under positive pressure. ADEQ approved this variance in a letter to Jack Kolopanis on October 11, 2011. The Permittee sends yearly status reports on the methane flow rates and concentration at the wells covered by the variances. The Permittee will also notify ADEQ 15 days prior to operating the wells at negative pressure. ADEQ was notified on March 6, 2017 that previously decommissioned wells 1 - 4 were abandoned on January 30, 2017. In addition, ADEQ was notified on March 6, 2017 that wells 6, 8, 10, 12 and 15 were being decommissioned and new Horizontal Well 17 was being installed. The current collection system is comprised of vertical wells 5, 7, 9, 11, 13, 14 and 16, and horizontal collector 17 (first month monitoring is October 2017).

III. EMISSIONS

Table 1: Potential Emissions

Pollutant	Emissions (tons per year)
PM	108.52
PM₁₀	32.44
PM_{2.5}	13.40
NO_x	4.44
CO	24.17
SO₂	0.99
VOC	4.41
HAPs	1.53

IV. APPLICABLE REGULATIONS

Table 2 displays the applicable requirements for each permitted piece of equipment along with an explanation of why the requirement is applicable.

Table 2: Verification of Applicable Regulations

Unit	Control Device	Rule	Discussion
MSW Landfill	Gas Collection and Control system (GCCS) required when NMOC > 50 Mg/yr	40 Code of Federal Regulation (CFR) Part 60 Subpart WWW 40 CFR Part 63 Subpart AAAAA	Subpart WWW regulates emissions of landfill gas from MSW landfills and Subpart AAAAA is triggered if size and emissions exceed threshold levels requiring a collection system as set forth in WWW.
Fugitive dust sources	Water Trucks Dust Suppressants	A.A.C. R18-2 Article 6 A.A.C. R18-2-702	These standards are applicable to all fugitive dust sources at the facility.
Abrasive Blasting	Wet blasting; Dust collecting equipment; Other approved methods	A.A.C. R-18-2-702 A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.



Unit	Control Device	Rule	Discussion
Spray Painting	Enclosures	A.A.C. R18-2-702 A.A.C. R-18-2-727	This standard is applicable to any spray painting operation.
Demolition/renovation operations	N/A	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.
Mobile sources	None	A.A.C. R18-2-801	These are applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.

V. PREVIOUS PERMIT CONDITIONS

Permit No. 54649 was issued on February 26, 2013, for the continued operation of this facility. Table 3 below illustrates if a section in Permit No. 67216 was revised or deleted.

Table 3: Permit No. 67216

Section No.	Determination		Comments
	Revised	Delete	
Att. A.	X		General Provisions - Revised to represent most recent template language.
Att. B. V	X		Fugitive Dust - Revised to represent most recent template language.
Att. B. VI	X		Mobile Source Requirements - Revised to represent most recent template language.
Att. B. VII	X		Other Periodic Activities - Revised to represent most recent template language.

VI. MONITORING REQUIREMENTS

A. Facility Wide

1. At the frequency specified in the following sections of this permit, the Permittee shall conduct an instantaneous survey of visible emissions from both process stack sources, when in operation, and fugitive dust sources.
2. If the plume on an instantaneous basis appears less than or equal to the applicable opacity standard, then the Permittee shall keep a record of the name of the observer, the date on which the instantaneous survey was made, and the results of the instantaneous survey.
3. If the plume on an instantaneous basis appears greater than the applicable opacity standard, then the Permittee shall immediately conduct a six-minute observation of the plume:
 - a. If the six-minute observation of the plume is less than or equal to the

applicable opacity standard, then the Permittee shall record the name of the observer, the date on which the six-minute observation was made, and the results of the six-minute observation.

- b. If the six-minute observation of the plume is greater than the applicable opacity standard, then the Permittee shall do the following:
 - (1) Adjust or repair the controls or equipment to reduce opacity to less than or equal to the opacity standard;
 - (2) Record the name of the observer, the date on which the six-minute observation was made, the results of the six-minute observation, and all corrective action taken; and
 - (3) Report the event as an excess emission for opacity in accordance with Condition XII.A of Attachment “A”.
 - (4) Conduct another six-minute observation to document the effectiveness of the adjustments or repairs completed.

B. NMOC Emission

- 1. The Permittee is required to operate a device to continuously monitor for the presence of a flame at the flare.
- 2. The Permittee is required to operate a device to record the flow to or bypass of gas to the flare.

C. Fugitive Dust

- 1. The Permittee is required to keep record of the dates and types of dust control measures employed.
- 2. Each month, the Permittee shall monitor visible emissions from fugitive sources.

D. Mobile Sources

The Permittee is required to keep records of all emission related maintenance performed on the mobile sources.

E. Periodic Activities

- 1. The Permittee is required to record the date, duration and pollution control measures of any abrasive blasting project.
- 2. The Permittee is required to record the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.
- 3. The Permittee is required to maintain records of all asbestos related demolition or renovation projects. The required records include the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents.



VII. COMPLIANCE HISTORY

During the last permit term, an NOC (Case ID 171530) was issued to this facility on August 18, 2017, resulting from a flow meter malfunction. This facility corrected the malfunction and the case was closed on September 5, 2017.

Additionally this facility was inspected forty-four (44) times during the last permit term and no other deficiencies were noted during these inspections.

VIII. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
CFR	Code of Federal Regulations
CH ₄	Methane
CO	Carbon Monoxide
HAP	Hazardous Air Pollutants
MG/yr	Megagram per Year
MSDS	Material Safety Data Sheet
MSW	Municipal Solid Waste (Landfill)
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMOC	Non Methane Organic Compounds
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standard
PM _{2.5}	Particulate Matter Smaller than 2.5 Microns
PM ₁₀	Particulate Matter Smaller than 10 Microns
PM	Particulate Matter
SO ₂	Sulfur Dioxide
VOC	Volatile Organic Compounds
Yr	Year